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Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

REMARKS/ARGUMENTS:

Minor changes are made to this specification. Claims 14-16 are amended. New claims 25-35 are added. Claims 1 and 6-35 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention relates to a conveying apparatus for an article to be inspected by an inspecting apparatus for small articles such as medicine in the form of tablets, capsules, etc., small confectionery such as a candy and the like, a washer, a battery cell, or the like, in a defect inspection process, a visual inspection process, a dimensional check process or the like. (Applicant's specification, at p. 1, first paragraph).

SPECIFICATION:

The abstract of the disclosure is objected to because phrases such as "A conveying apparatus of the invention" and "In accordance with the conveying apparatus of the invention" should be avoided. Correction is required by the Office. A replacement abstract, with the above-mentioned phrases removed, is attached hereto. In addition, other minor changes to the abstract were made. Withdrawal of the objection is respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102:

Claim 6 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Kaziura et al., U.S. Patent No. 4,757,382. Applicant respectfully traverses this rejection. Claim 6 is as follows:

An aligning and supplying apparatus for mounting a conveyed article having different thickness and width and capable of being stably mounted by setting a thickness direction or a width direction to a vertical direction, respectively, comprising:

Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

a turn table in which a step portion having a predetermined height is provided along a peripheral edge of a mounting surface;

a width guide crossing to said step portion in such a manner as to guide said conveyed article mounted on said mounting surface from a center side to an outer peripheral side due to a rotation of said turn table, having one end positioned at the center side of said turn table rather than said step portion and having another end protruding outward from the outer periphery of said step portion so as to be fixed; and

a thickness gate arranged in an upper side of said conveyed article passing within said width guide on said turn table, and having a projection portion protruding toward said conveyed article so as to be capable of getting down said conveyed article in a high attitude on said step portion without getting down said conveyed article in a low attitude at a time when said conveyed article moving along said width guide due to the rotation of said turn table rides over said step portion.

Applicant respectfully submits that Kaziura cannot anticipate claim 6 because Kaziura does not teach a step portion. In the present invention, the turn table 10 is structured such that a sheet having a thickness of about 0.5 mm is adhered to its mounting surface 10a, and a step portion 56 having a predetermined height is provided along a peripheral edge of the mounting surface 10a. The step portion 56 is structured, as shown in Fig. 8, such that a sheet, for example, having a thickness of about 0.5 mm is adhered to an outer periphery. (Applicant's specification, from paragraph starting on p. 14, line 16; Figures 8, 9A-C, and 10A-C).

The Office refers to item 19 of Kaziura as being a step portion. Applicant respectfully disagrees. Kaziura only refers to item 19 as being a peripheral wall. (Kaziura, column 4, line 58-column 5, line 6). Furthermore, an examination of Figures 2, 3, and 8 of Kaziura reveals only a peripheral wall 19. There is no

Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

evidence of a step portion in any of these figures. Accordingly, there is nothing in Kaziura to teach or suggest a step portion.

Moreover, Kaziura does not teach a thickness gate having a projection portion. In the present invention, the thickness gate 55 is arranged in an upper side of the conveyed article 11 passing within the width guide 15 on the turn table 10, and has a projection portion 57 protruding toward the conveyed article 11. The projection portion 57 along with step portion 56 are used to rotate the conveyed article 11 when the conveyed article 11 is positioned such that its width is oriented in the vertical direction. (Applicant's specification, from paragraph starting on p. 15, line 23; Figures 9A-C and 10A-C).

The Office refers to item 22 of Kaziura as being a projection portion. Applicant respectfully disagrees. Kaziura only refers to item 22 as being a thickness gate. (Kaziura, column 4, line 58-column 5, line 6). Furthermore, an examination of Figures 3 and 8 of Kaziura reveals only a thickness gate 22. This thickness gate does not have a projection portion. Accordingly, there is nothing in Kaziura to teach or suggest a thickness gate having a projection portion.

In summary, present claim 6 advantageously allows getting down the conveyed article in a high attitude on the step portion without getting down the conveyed article in a low attitude at a time when the conveyed article moving along the width guide due to the rotation of the turn table rides over the step portion. (Applicant's specification, from paragraph starting on p. 6, line 23).

In light of the foregoing, Applicant respectfully submits that Kaziura could not have anticipated or rendered obvious claim 6, because Kaziura fails to teach or suggest each and every claim limitation. Withdrawal of this rejection is thus respectfully requested.

New claims 25-35 depend from claim 6 and are believed to be patentable for at least the same reasons as claim 6.

Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

CLAIM REJECTIONS UNDER 35 U.S.C. § 103:

Claims 1, 7-15, and 17-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaziura et al. in view of Ackley, Sr. et al., U.S. Patent No. 4,393,973. Applicant respectfully traverses the rejection.

Claim 1 is as follows:

A conveying apparatus comprising:

a rotary disc portion having a pair of parallel plate members with a region defined there between;

a gap formed on the region between the pair of parallel plate members;

a first suctioning device disposed to secure an article on the outer peripheral surfaces of the pair of parallel plate members by extracting air from the gap; and

a linear conveying portion having a pair of parallel conveying belts with a gap formed there between, the linear conveying portion being in communication with the rotary disc portion to transfer the article from the rotary disc portion to the linear conveying portion.

Applicant respectfully submits that Kaziura and Ackley, Sr. cannot render claim 1 obvious, because Kaziura and Ackley, Sr. do not teach or suggest "a conveying apparatus comprising ... a linear conveying portion having a pair of parallel conveying belts with a gap formed there between, the linear conveying portion being in communication with the rotary disc portion to transfer the article from the rotary disc portion to the linear conveying portion."

The Office states, "Kaziura et al. discloses both rotary transfer devices and linear transfer devices each having suction means for feeding articles for one point to another in an inspection and sorting operation, but does not disclose the rotary transfer device in combination with the linear conveying portion." However, the Office further states that a mere rearrangement of the parts disclosed in Kaziura

Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

would have been an obvious design choice and expedient in view of Ackley Sr. On this latter point, the Applicant respectfully disagrees.

A person of ordinary skill in the art would have no motivation to combine the teachings of Ackley, Sr. with those of Kaziura. In Ackley, Sr., the rotary disc portion that is in communication with the linear conveying portion is located adjacent to a rotatable pick off wheel 100, for synchronous rotation therewith. Pick off wheel 100 comprises semi-circular cut-out sections 102, 104 which alternate about the periphery of the wheel. Cut-out section 102 is designed to have a width sufficient to firmly grasp a cap portion of a capsule therein but being too wide to grasp a body portion of a capsule therein. (Ackley, Sr., column 4, lines 11-19; Figure 1). Accordingly, the rotary disc portion of Ackley, Sr., provides a means for determining whether a capsule gets accepted or rejected. In Kaziura, a photographic inspection system is used to determine whether a capsule gets accepted or rejected. (Kaziura, column 5, line 58-column 6, line 14; Figure 2). Therefore, a person of ordinary skill in the art would not be motivated to combine Ackley, Sr. with Kaziura, since this combination would result in a redundant inspection system.

Furthermore, having the linear conveying portion being in communication with the rotary disc portion as taught by instant claim 1 provides the advantage that it is possible to stably convey and inspect articles without the need for a lot of space. (Applicant's specification, from paragraph starting on p. 4, line 11). Both Ackley, Sr. and Kaziura are silent with respect to obtaining this advantage.

In light of the foregoing, Applicant respectfully submits that Kaziura and Ackley, Sr. could not have made claim 1 obvious, because the combination of references fails to teach or suggest each and every claim limitation. Claims 7-15, 17, and 18 depend from claim 1 and therefore, cannot be rendered obvious over the cited references for the same reasons discussed above. Withdrawal of these rejections is thus respectfully requested.

Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

Claims 19-24, although not depending from claim 1, have the limitation "a conveying apparatus comprising ... a linear conveying portion having a pair of parallel conveying belts with a gap formed there between, the linear conveying portion being in communication with the rotary disc portion to transfer the article from the rotary disc portion to the linear conveying portion."

Therefore, claims 19-24 cannot be rendered obvious over the cited references for the same reasons as discussed above. Withdrawal of these rejections is thus respectfully requested.

In addition, claims 7, 8, and 10 require the limitation that "supporting members positioned in the pair of parallel plate members to hold the article in place such that the article transfers to the linear conveying portion." This limitation is neither taught nor suggested by the cited references. The Office refers to items 26 and 27 of Kaziura as evidence for teaching the support members of claims 7, 8, and 10. Applicant respectfully disagrees. Items 26 and 27 of Kaziura are provided with the linear transporting device and not positioned in the pair of parallel plate members as taught by present claims 7, 8, and 10. (Kaziura, column 7, lines 5-68; Figures 5, 6, and 8). Ackley, Sr. is silent with respect to support members. Withdrawal of these rejections is thus respectfully requested.

Furthermore, the Office refers to items 24 and 25 of Kaziura as evidence for teaching the "grooves provided around the peripheral surface of each of the parallel plate members" of claims 9, 20, and 21. Applicant respectfully disagrees. Items 24 and 25 of Kaziura are grooves of the linear transporting device and not grooves provided around the peripheral surface of each of the parallel plate members. A pair of fixed opposed plates 1' and 2' are provided at their upper peripheries with concave guide rails 24 and 25, with guide strings 26 and 27 acting as movable edges for transporting the articles m along the fixed plates 1' and 2'. (Kaziura, column 5, lines 5-11; Figures 5). Moreover, Figure 1 of Kaziura clearly indicates that the rotary disk portions do not have grooves in the periphery, because the rotary disk does not have support materials. Ackley, Sr. is silent with respect to grooves

Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

provided around the peripheral surface of each of the parallel plate members.
Withdrawal of these rejections is thus respectfully requested.

ALLOWABLE SUBJECT MATTER:

The Office objected to claim 16 as being dependent upon a rejected base claim, but states that claim 16 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." In response, Applicant rewrote claim 16 in the manner suggested by the Office. Withdrawal of this objection and allowance of claim 16 is thus respectfully requested.

The art made of record but not relied upon by the Examiner has been considered. However, it is submitted that this art neither describes nor suggests the presently claimed invention.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.

Appl. No. 10/089,598
Amdt. Dated August 29, 2003
Reply to Office Action of May 1, 2003

Attorney Docket No. 81833.0036

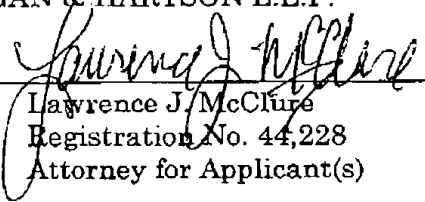
If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: August 29, 2003

By:


Lawrence J. McClure
Registration No. 44,228
Attorney for Applicant(s)

500 South Grand Avenue, Suite 1900
Los Angeles, California 90071
Phone: 213-337-6700
Fax: 213-337-6701

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